CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

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SPECIAL ORDER NO. R7-2007-0069
AMENDING WASTE DISCHARGE REQUIREMENTS ORDER NO. R7-2004-0004
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT NO. CA0104426 FOR THE
CITY OF EL CENTRO WASTEWATER TREATMENT PLANT
IMPERIAL COUNTY

The California Regional Water Quality Control Board, Colorado River Basin Region (hereinafter Regional Water Board), finds:

A. **Background.**

1. On March 30, 2004, the Regional Water Board adopted Order No. R7-2004-0004, NPDES No. CA0104426, prescribing Waste Discharge Requirements for the City of El Centro (herein after Discharger) Wastewater Treatment Plant (WWTP) for the discharge of 8.0 million gallons per day (mgd) of secondary treated wastewater to the Central Main Drain, a water of the United States. The Central Main Drain conveys the effluent for eight (8) miles to the Alamo River, which then flows 39 miles to the Salton Sea. Order No. R7-2004-0004 will expire on March 30, 2009.

2. The California Toxics Rule (CTR) (40 CFR 131.38(c)(3)) and the State Water Resource Control Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) establish specific criteria for fresh waters and specific criteria for salt waters. When the salinity of receiving water is between 1 and 10 parts per thousand, such as is the case for the Central Main Drain, the CTR and SIP provide for the Regional Board to prescribe in a permit the more stringent of the two criteria. Based on the foregoing, Order No. R7-2004-0004, as adopted by the Regional Board in 2004, includes interim and final effluent limits for copper, nickel, and selenium that were developed based on saltwater criteria, which are more stringent than fresh water criteria for those pollutants.

3. On February 20, 2007, the Discharger conducted a Biological Assessment at the location of the discharge. The areas of observation were approximately 200 meters upstream and 100 meters downstream of the discharge. The objective of the Biological Assessment was to determine whether water, plant life, and aquatic life at the discharge location are more typical of a saltwater or a freshwater environment.

4. On May 24, 2007 the Discharger submitted the results of the Biological Assessment to the U.S. Environmental Protection Agency (USEPA) requesting approval to use alternative freshwater criteria at the location of the discharge. This assessment has determined that the applicable reach of the Central Main Drain is characterized as freshwater; therefore, water quality criteria for the protection of freshwater aquatic life are applicable.

5. Board Order No. R7-2004-0004 may be modified, rescinded and reissued, for cause. The filing of a request by the Discharger for a Board Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include, but are not limited to, the

promulgation of new regulations, modification of land application plans, or modification in sludge use or disposal practices, or adoption of new regulations by the State Board or the Regional Board, including revisions to the Basin Plan.

6. USEPA reviewed the Biological Assessment prepared by the Discharger. On August 1, 2007, USEPA issued a tentative approval of the findings in the Discharger's Biological Assessment and the application of water quality criteria for the protection of freshwater aquatic life.

7. Pursuant to 40 CFR 124.10(b), a thirty (30) day public notice and comment period of USEPA's tentative approval of the Biological Assessment and this revised Board Order is required prior to their becoming final. These public participation requirements are necessary to provide stakeholders potentially affected by this action with an opportunity to object to or comment on the proposed tentative approval and revised Order.

8. Pursuant to 40 CFR 124.10(b) and California Water Code (CWC) Section 13167.5, the Regional Board published Public Notice No. 7-07-48 for this proposed Order on August 6, 2007.

9. This special Order revises Board Order No. R7-2004-0004 to designate the Central Main Drain as a freshwater environment and establish interim and final effluent limits based on CTR and SIP freshwater criteria for the discharge.

10. The USEPA Clean Water Act (CWA) Section 303(d) List identifies the Salton Sea as impaired by nutrients, salts, and selenium. The Salton Sea and its tributaries may be affected by future Total Maximum Daily Loads (TMDLs) developed for those water bodies. A nutrient TMDL is under development for the Salton Sea that may have impacts on permitted discharges to tributaries to the Salton Sea (Alamo River and Central Main Drain). The nutrient TMDL for the Salton Sea is tentatively scheduled for completion in 2009. Monitoring for nutrients has also been included in the upstream receiving water at Monitoring Station R-1 in this special Order, to amend the Monitoring and Reporting Program of Board Order No. R7-2004-0004.

11. Board Order No. R7-2004-0004 established Water Quality Based Effluent Limits (WQBELs) for TDS. These WQBELs were based on receiving water quality objectives (WQOs) established in the Basin Plan that state that any discharge to the Imperial Valley Drains shall not cause the concentration of TDS in the surface water to exceed a maximum daily concentration of 4,500 mg/L and an annual average concentration of 4,000 mg/L. Board Order No. R7-2004-0004 included average monthly and maximum daily effluent limitations for TDS. Due to the incorrect interpretation of the Basin Plan receiving water quality objectives for TDS as numeric effluent limitations, this special Order replaces the numeric effluent limitations for TDS with a narrative effluent limitation and establishes a receiving water limitation for TDS to accurately apply the WQOs of the Basin Plan. The replacement of those numeric effluent limitations with a narrative effluent limitation and receiving water limitation for TDS does not constitute backsliding due to the exception contained in section 402(o)(2)(B)(ii) of the CWA. This statutory provision states that a permit may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if "the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit . . . ." Furthermore, the effluent data were evaluated in conducting a Reasonable Potential Analysis (RPA) to determine whether TDS would be discharged at a level that would have the reasonable potential to cause or contribute to an

excursion above any State water quality standard, including State narrative criteria for water quality. The discharge does not demonstrate the reasonable potential to exceed water quality objectives for TDS. Therefore, Water Quality Based Effluent Limits for TDS are not required for the discharge. Corresponding to the application of receiving water limits for TDS, monitoring requirements have been established in this amendment for TDS at receiving water stations R-1 and R-2.

B. **Facility Description.** The City of El Centro owns and operates the wastewater collection, treatment and disposal system (hereinafter referred to as facility) and provides sewerage service to a population of 40,000. The WWTP has a treatment capacity of eight (8) million gallons per day (MGD) and is located in Section 39, T15S, R13E, SBB&M.

C. **California Environmental Quality Act (CEQA).** This action to amend an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (commencing with Section 21100) of Division 13 of the California Public Resources Code in accordance with Section 13389 of the CWC.

D. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations (see Attachment A of this Order for full details on Public Participation).

E. **Consideration of Public Comment.** The Regional Water Board, in a public hearing, heard and considered all comments pertaining to the discharge.

F. **Anti-degradation Policy.** 40 CFR Section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. To comply with this federal requirement, the State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16, titled "Policy with Respect to Maintaining High Quality Waters of the State." Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires discharges to waters of the State be regulated to achieve the "highest water quality consistent with maximum benefit to the people of the State." It also establishes the intent that where waters of the State are of higher quality than that required by state policies, including Water Quality Control Plans, such higher quality "shall be maintained to the maximum extent possible" unless it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in plans and policies (e.g., violation of any water quality objective). The discharge is also required to meet waste discharge requirements that result in the best practicable treatment or control necessary to assure that pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people will be maintained.

The source water for the City of El Centro and the entire Imperial Valley is the Colorado River. Average annual precipitation in the Imperial Valley is insignificant (approximately 2 inches/year). Therefore, the Central Main Drain is an effluent-dominated surface water that exclusively carries the discharge from the Discharger's WWTP and agricultural returns flows in the form of tilewater, tailwater and, occasionally, operational spills of irrigation water from adjacent farmlands. The Central Main Drain discharges to the Alamo River, which in turn discharges to the Salton Sea. Tailwater is irrigation water that does not percolate into the soil, and exits the lower end of the field into the drain. Tailwater tends to erode fields and thus acquire silt and sediments as it crosses and exits a field. Tilewater is water that has

percolated through the soil, but is not absorbed by crops. Tilewater flushes salts from the soil. This highly saline water accumulates in tile lines beneath the fields, wherein it is transported to drains by gravity flow or a sump system. Consequently, "background" water quality in the drain is difficult to establish for the purpose of conducting a typical antidegradation analysis. It is likely that the Central Main Drain has historically contained "background" water from farmland that contains pollutants at concentrations that violate certain Basin Plan water quality objectives for those pollutants, in particular, pesticides, silt/sediment[1], and selenium. It also contains nutrients (e.g., phosphorous) at concentrations that contribute to the nutrient impairment of the Salton Sea. The agricultural return flows, however, are essentially free of BOD and fecal coliform bacteria and have pH well within the receiving water quality objective of 6.0 to 9.0 pH Units.

The discharge from the WWTP contains conventional pollutants (BOD, TSS, fecal coliform bacteria and pH) that are controlled through best practicable control technology currently available (BPT) and best available technology economically achievable (BCT) to prevent exceedances of the receiving water quality objectives for those pollutants and prevent adverse impacts on the REC-I and REC-II beneficial uses of the Drain. The discharge also contains TDS, but at concentrations significantly below the 4000 mg/L TDS WQO for the receiving water. Except for selenium, the discharge from the WWTP does not contain any of the 303(d) List of impairing pollutants for the receiving water at detectable levels. Therefore, except for selenium, the discharge is not likely to contribute to exceedances of the WQOs for 303(d) List pollutants.

Selenium has been found in the WWTP effluent at a Maximum Effluent Concentration (MEC) of 27 ug/L and in the receiving water at a maximum concentration of 10 ug/L, both of which are above the receiving WQO of 5.0 ug/L. The effluent discharge exhibits a reasonable potential to contribute to a violation of the WQO for selenium since both the MEC and the maximum detected upstream receiving water concentration (B) for Central Main Drain exceed the WQO for selenium. Accordingly, WQBELs for selenium were calculated pursuant to the water quality criteria promulgated in the CTR and implemented in accordance with the SIP. The established WQBELs for selenium prevent adverse impacts of the WARM, WILD, and RARE beneficial uses of the Drain and ensure compliance with the Basin Plan narrative water quality objective for metals (see Basin Plan, Ch. 3, Item N, p. 4). Further, the Order establishes interim effluent limitations for selenium that are effective from September 19, 2007, to May 18, 2010, and final WQBELs effective thereafter.

On November 17, 2003, the Discharger submitted an Infeasibility Report to the Regional Water Board. The Infeasibility Report documents efforts the Discharger has made to quantify pollutant levels and source control and pollutant minimization efforts, proposes a schedule for additional source control measures, and demonstrates that the proposed schedule is as short as possible. Board Order No. R7-2004-0004 implements a five-year Compliance Schedule with milestones and completion dates that identify the measures that will be taken to achieve compliance with the permit limitations specified in Effluent Limitations, A.6. Nevertheless, the BOD, TSS, bacteria, and selenium in the discharge are likely to lower water quality in the receiving water (i.e., cause degradation). For conventional pollutants, including BOD, TSS and bacteria, this degradation is restricted to pollutants associated with domestic wastewater, is localized, and will not result in water quality less than that prescribed in the Basin Plan. For toxic pollutants, including Selenium, this degradation will be not significant, once controlled, and will not result in water quality less than that prescribed in the Basin Plan.

[1] Silt/sediment can be measured in terms of TSS.

The discharge from the WWTP as permitted herein reflects best practicable treatment and control (BPTC) for the subject wastewater. The control is intended to assure that the discharge does not create a condition of pollution or nuisance and that the highest "background" water quality as defined above will be maintained. The WWTP incorporates:

a. technology for secondary treated domestic wastewater;

b. sludge handling facilities;

c. an operation and maintenance manual;

d. staffing to assure proper operation and maintenance; and

e. a standby emergency power generator of sufficient size to operate the necessary treatment units during periods of loss of commercial power.

The discharge is necessary to accommodate economic development in the area and essential public services to the City of El Centro, which are an important benefit to the State.

Based on the foregoing, the discharge as permitted herein is consistent with Resolution No. 68-16.

IT IS HEREBY ORDERED, that Order No. R7-2004-0004 is amended in the manner specified below upon the effective date of this Order, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order as well as with those portions of Order No. R7-2004-0004 that were not amended by this Order:

1. Page 3, Finding No. 22. Replace finding with the following language:

   "22. On March 27, 2001, the Regional Board received the first data set of monitoring results for the Priority Pollutants monitoring submitted by the discharger as required by the CTR (40 CFR §131.38). Based on the Reasonable Potential Analysis methodology in the State Implementation Plan (Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California), the following constituent has been found to have reasonable potential to cause or contribute to an excursion above water quality objectives: selenium."

2. Page 4, Finding No. 24. Replace finding with the following language:

   "24. The governing Water Quality Objective (WQO) for copper is 29 ug/L, the chronic freshwater aquatic life criteria contained in the CTR. Copper does not have a reasonable potential to exceed water quality objectives. Therefore, Water Quality Based Effluent Limitations (WQBELs) are not required."

3. Page 4, Finding No. 25. Replace finding with:

   "25. The governing Water Quality Objective (WQO) for nickel is 160 ug/L, the chronic freshwater aquatic life criteria contained in the CTR. Nickel does not have a reasonable potential to exceed water quality objectives. Therefore, Water Quality Based Effluent Limitations (WQBELs) are not required."

4. Page 4, Finding No. 27. Replace finding with:

   "27. The discharger is not able to consistently comply with the new effluent limitations for selenium."

5. Page 5, A. Effluent Limitations No. 1. Replace table with the following table:

Constituent	Units	30-Day Arithmetic Mean Discharge Rate[3]	7-Day Arithmetic Mean Discharge Rate[4]
20° C BOD_5[5]	mg/L[6] lb/day[7]	30 2002	45 3003
Total Suspended Solids	mg/L lb/day	30 2002	45 3003

[3] 30 Day Mean-The arithmetic mean of pollutant parameter values of samples collected in a calendar month s as specified in the Monitoring and Reporting Program.
[4] 7 Day Mean-The arithmetic mean of pollutant parameter values of samples collected in a calendar week (Sunday – Saturday) as specified in the Monitoring and Reporting Program.
[5] BOD_5 - Biochemical Oxygen Demand
[6] mg/L - milligrams per Liter
[7] pounds per day

6. Page 6, A. Effluent Limitations No. 6. Replace table with the following:

Constituents	Unit	Date Effluent Limit Becomes Effective	Average Monthly Effluent Limit	Maximum Daily Effluent Limit
Selenium (interim)	µg/L	March 10, 2004	8.0	8.22
Selenium (final)	µg/L	March 10, 2009	4.2	8.1

7. Page 6, A. Effluent Limitations. Add the following new effluent limitation No. 7:

   "7. Discharges of wastes or wastewater shall not increase the total dissolved solids content of receiving waters, unless it can be demonstrated to the satisfaction of the Regional Water Board that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters."

8. Page 7, B. Receiving Water Limitations. Add new receiving water limitation B.1.k. as follows:

   "k. The concentration of total dissolved solids in Central Main Drain to exceed an annual average concentration of 4,000 mg/L or an instantaneous maximum concentration of 4,500 mg/L."

9. Page 14, E. Provisions, No. 24. Delete entire paragraph (since it is repeated as Specifications D.15) and renumber subsequent provisions Nos. "25 – 28" as Provisions Nos. "24 – 27":

   "24. The discharger shall, as required by the Executive Officer, conduct a Pollutant Minimization Program in accordance with the California Toxics Policy when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and a sample result is reported as detected and not quantified and the effluent limitation is less than the reported minimum level; or a sample result is reported as not detected and the effluent limitation is less than the method detection limit."

10. Monitoring and Reporting Program R7-2004-0004 (Revision 1), Page 2, Effluent Monitoring. Replace table with the following table:

Constituent	Unit	Type of Sample	Sampling Frequency	Reporting Frequency
Daily Effluent Discharge	MGD[5]	Flow Meter Reading	Daily[6]	Monthly
Temperature	°C	Grab	Daily	Monthly
Suspended Solids	mg/L	24-Hr. Composite	Twice Weekly	Monthly
20°C BOD_5	mg/L	24-Hr. Composite	Twice Weekly	Monthly
pH		Grab	Daily[7]	Monthly
Escherichia Coli (E. Coli)	MPN/100 ml	Grab	Twice Weekly	Monthly
Nitrates as Nitrogen (N)	mg/L	Grab	Monthly	Monthly
Nitrites as N	mg/L	Grab	-Monthly	Monthly
Ammonia Nitrogen as N	mg/L	Grab	Monthly	Monthly
Total Nitrogen as N	mg/L	Grab	Monthly	Monthly
Total Phosphate as Phosphorus (P)	mg/L	Grab	Monthly	Monthly
Ortho-Phosphate as P	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	24-Hr. Composite	Twice Weekly	Monthly
Selenium	µg/L[8]	Grab	Monthly	Monthly
Sulfates	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Hardness (as CaCO3)	mg/L	Grab	Quarterly	Quarterly
Priority Pollutants Compounds	µg/L	Grab	Annually	Annually
Oil and Grease[9]	mg/L	Grab	Annually	Annually

11. Monitoring and Reporting Program R7-2004-0004 (Revision 1), Page 3, Receiving Water Monitoring, replace table with the following:

Constituent	Unit	Station	Sampling Frequency	Reporting Frequency
Temperature	°C	R-1, R-2	Monthly	Monthly
pH	----	R-1, R-2	Monthly	Monthly
Hardness (CaCO3)	mg/L	R-1, R-2	Monthly	Monthly
Dissolved Oxygen	mg/L	R-1, R-2	Monthly	Monthly
Total Dissolved Solids	mg/L	R-1, R-2	Monthly	Monthly
Nitrates as Nitrogen (N)	mg/L	R-1	Monthly	Monthly
Nitrites as N	mg/L	R-1	Monthly	Monthly
Ammonia Nitrogen as N	mg/L	R-1	Monthly	Monthly
Total Nitrogen as N	mg/L	R-1	Monthly	Monthly
Total Phosphate as Phosphorus (P)	mg/L	R-1	Monthly	Monthly
Ortho-Phosphate as P	mg/L	R-1	Monthly	Monthly
Priority Pollutants	µg/L	R-1	Annually	Annually

12. Monitoring and Reporting Program R7-2004-0004 (Revision 1), Page 9, Reporting No. 13. Replace with the following:

    11. DMRs must be signed and certified as required by the standard provisions. The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	**FedEx/UPS/ Other Private Carriers**
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

13. Fact Sheet, Page 1. Replace contact person with the following:

    Contact Person: Terry Hagen

14. Fact Sheet, Pages 3 to 5, VI. Proposed Water Quality Based Effluent Limitations (WQBELs). Replace entire section with the following:

VI. Proposed Water Quality-Based Effluent Limitations (WQBELs)

Effluent discharged from this facility could contain pollutants in sufficient quantities to affect receiving water quality. Pursuant to Section 13263, Article 4, Chapter 4 of the Porter Cologne Water Quality Control Act, the Regional Boards are required to issue Waste Discharge Requirements for discharges that could affect the quality of the State's waters. Furthermore, 40 CFR 122.1 requires the issuance of an NPDES permit for pollutants discharged from a point source to waters of the United States. The discharge requirements contain specific discharge limitations for selected pollutants.

Constituents	Basis for Limitations
Biochemical Oxygen Demand (BOD)	Discharges to waters that support aquatic life that is dependent on oxygen. Organic matter in the discharge may consume oxygen as it breaks down.
Total Suspended Solids (TSS)	High levels of suspended solids can adversely impact aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of suspended solids.
Hydrogen Ion (pH)	Hydrogen Ion (pH) is a measure of Hydrogen Ion concentration in the water. A range specified between 6 to 9 ensures suitability of biological life. This limitation has been adopted in the Basin Plan of the Region.
Escherichia Coli (E. coli)	These limits are required by the Basin Plan for waters designated for water contact recreation (REC-I) or noncontact water recreation (REC-II).
Selenium	Selenium is known to be bioaccumulative and high concentrations can cause adverse effects on aquatic life. The criteria for this limitation has been adopted in USEPA's CTR.
Flow	The design capacity of the treatment plant is 8.0 MGD.

The U.S. Environmental Protection Agency promulgated the California Toxics Rule (CTR) (40 CFR §131.38). The CTR prescribes new criteria for both human health protection and protection of aquatic life. New numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants are listed. In addition, the CTR contains a compliance schedule provision, which authorizes the State to issue schedules of compliance for new or revised NPDES permit limits based on the federal criteria when certain conditions are met.

The following final water quality based effluent limitations (WQBELs) are based on monitoring results and use the California Toxics Rule and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The derivation of WQBELs in general, and for the limits for selenium shown in the table below, follows.

Selenium	Average Monthly Effluent Limit (µg/L) = 4.2 Maximum Daily Effluent Limit (µg/L) = 8.1

The discharger is not able to consistently comply with the new effluent limitations for Selenium. Therefore, interim limits have been set as follows:

The governing Water Quality Objective (WQO) for selenium is 5.0 ug/L, the freshwater aquatic life criterion contained in the CTR. As noted in Finding 22, above, the level of selenium in the discharge has the reasonable potential to cause or contribute to an excursion above water quality objectives. Therefore, final Water Quality Based Effluent Limitations (WQBELs) are required. The WQBELs calculated pursuant to State Implementation Policy (SIP) procedures are 4.2 µg/L monthly average and 8.1 µg/L daily maximum. The Discharger indicated in its November 17, 2003, Feasibility Study that it is infeasible to comply immediately with the WQBELs. Therefore, pursuant to the provisions of the SIP, an interim effluent limit for selenium is required. The previous permit did not contain an effluent limit for selenium, and it is not possible to statistically determine current plant performance based on four data points submitted to date. Therefore, the interim average monthly effluent limit (AMEL) is the Maximum Effluent Concentration (MEC), 8.0 µg/L. The interim maximum daily effluent limit (MDEL) is 8.22 µg/L, the MDEL calculated pursuant to the SIP. These interim effluent limits are based on the best professional judgment of Regional Board staff.

In accordance with section 1.3 of the SIP, the Regional Water Board conducted a RPA for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the Order. The Regional Water Board analyzed effluent data to determine if a pollutant in a discharge has the reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have the reasonable potential to cause or contribute to an excursion above a water quality standard, numeric WQBELs are required. The RPA considers criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identified the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

1) Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.

2) Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limit is needed.

3) Trigger 3 – If other related information, such as a 303(d) listing for a pollutant, discharge type, compliance history, etc., indicates that a WQBEL is required.

WQBEL Calculations

Final WQBELs are based on monitoring results and following the calculation process outlined in section 1.4 of the SIP.

WQBELs Calculation for Selenium

The WQBELs for selenium, based on aquatic life criteria, were established for Order No. R7-2007-0069 as described below. The process for developing these limits is in accordance with section 1.4 of the SIP.

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

ECA = C + D(C-B) when C>B, and
ECA = C when C<= B,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 380 mg/L (as $CaCO_3$) was used for development of hardness-dependant criteria, and a pH of 7.02 was used for pH-dependant criteria.
D = The dilution credit, and
B = The ambient background concentration

For this Order, dilution was not allowed due to the nature of the receiving water and quantity of the effluent; therefore:

ECA = C

For selenium, the applicable water quality criteria are:

ECA_{acute}= Not Available
$ECA_{chronic}$= 5.0 µg/L
$ECA_{human\ health}$= Not Available

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For selenium, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP:

No. of Samples	CV	$Multiplier_{acute}$	$Multiplier_{chronic}$
73	0.56	0.34	0.55

LTA_{acute} = Not Available

$LTA_{chronic}$ = 5.0 µg/L x 0.54 = 2.74 µg/L

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For selenium, the most limiting LTA was the $LTA_{chronic}$

LTA = 2.74 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitations (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For selenium, the following data was used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

No. of Samples	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$
73	0.56	2.94	1.51

$AMEL_{aquatic\ life}$ = 2.74 x 1.51 = 4.2 µg/L

$MDEL_{aquatic\ life}$ = 2.74 x 2.94 = 8.1 µg/L

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

However, for selenium, the $ECA_{human\ health}$ = Not Available. The CTR does not contain a numeric selenium criterion protective of human health; therefore, it was not possible to develop a selenium AMEL based on human health criteria.

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the $Multiplier_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

A selenium $MDEL_{human\ health}$ could not be calculated because a selenium $AMEL_{human\ health}$ was not available. There are no criteria protective of human health for selenium; therefore, none of the limitations for selenium are based on human health criteria.

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
4.2 µg/L	8.1 µg/L	Not Applicable	Not Applicable

For selenium, there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are considered for WQBELs. The lowest (most restrictive) effluent limits, those based on aquatic life criteria, were incorporated into this Order.

15. Fact Sheet, Page 7, Table 1, Effluent Limitations No.1. Replace with the following:

Constituent	Unit	30-Day Arithmetic Mean Discharge Rate[7]	7-Day Arithmetic Mean Discharge Rate[8]
20° C BOD_5[9]	mg/L[10]	30	45
	lb/day[11]	2002	3003
Total Suspended Solids	mg/L	30	45
	lb/day	2002	303

16. Fact Sheet, Page 8, Table 1, Effluent Limitations No.6. Replace with the following:

Constituents	Unit	Date Effluent Limit Becomes Effective	Average Monthly Effluent Limit	Maximum Daily Effluent Limit
Selenium (interim)	ug/L	March 10, 2004	8.0	8.22
Selenium (final)	ug/L	March 10, 2009	4.2	8.1

17. Fact Sheet, Page 9, Receiving Water Limitations. Add new receiving water limitation as follows:

    m. The concentration of total dissolved solids in Central Main Drain to exceed an annual average concentration of 4,000 mg/L or an instantaneous maximum concentration of 4,500 mg/L.

18. Attachment A. Delete entire attachment:

I, Robert E. Perdue, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on September 19, 2007.

_____
ROBERT E. PERDUE, Executive Officer

ATTACHMENT A – PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Water Board) is considering the amendment of Waste Discharge Requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for City of El Centro District Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was published in the following newspapers: Desert Sun, and Imperial Valley Press. In addition, copies of proposed permit were sent to interested agencies and persons.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Officer at the Regional Water Board at the address above on the cover page of this Order.

Comments made in reference to the Biological Assessment and USEPA's approval letter should be directed to:

Matthew Mitchell
USEPA
75 Hawthorne Street (WTR-5)
San Francisco, CA 94105

To be fully responded to by staff and considered by the Regional Water Board and USEPA, written comments should be received at the Regional Water Board and USEPA offices by 5:00 p.m. on September 5, 2007.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	September 19, 2007
Time:	10:00 a.m.
Location:	City Council Chambers City of La Quinta 780495 Calle Tampico La Quinta, CA 92253

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be allowed as well; however, for accuracy of the record, a written copy of the oral testimony to be given should be provided prior to or at the hearing.

Please be aware that dates and venues of the Regional Water Board's public meeting and hearing may change. The latest information concerning any scheduling changes can be found at the Regional Water Board's website: **http://www.waterboards.ca.gov/coloradoriver/**.

Any person who is disabled and requires special accommodations to participate in this public meeting and hearing, please contact Hilda Vasquez at (760) 776-8950 no later than ten (10) days before the scheduled event.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within thirty (30) days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
1001 I Street
P.O. Box 100
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (760) 346-7491.

F. Register of Interested Persons

If you are interested in being placed on the mailing list for information regarding the WDRs and NPDES permit, please contact the Regional Water Board, reference this facility, and provide your name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this draft order should be directed to Jose Cortez at (760) 776-8963.